qMellon

User Manual

Runtime Client

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qMellon Runtime Client

1 RUNTIME CLIENT DESCRIPTION

1.1 General

Runtime Client is the program for the study of the educational material and is used by the users-students. Particularly, a user-student can study the educational applications that composed of stages and ALUs, can be taught and examined in several methodologies and can be self evaluated by using the application tests. It is mentioned that the user-student has access only to those applications that he/she is allowed to by the system administrator.

A basic function of the program is the monitoring and the recording of the user-student actions. This characteristic gives the capability to both instructor and user-student to know which educational units (applications, stages or ALUs) and when have been studied

1.2 Main Window

The main application window (Figure 1) includes:

- Menu
- Toolbar
- Application tree
- Preview window

that are described in more detail in the sequel.

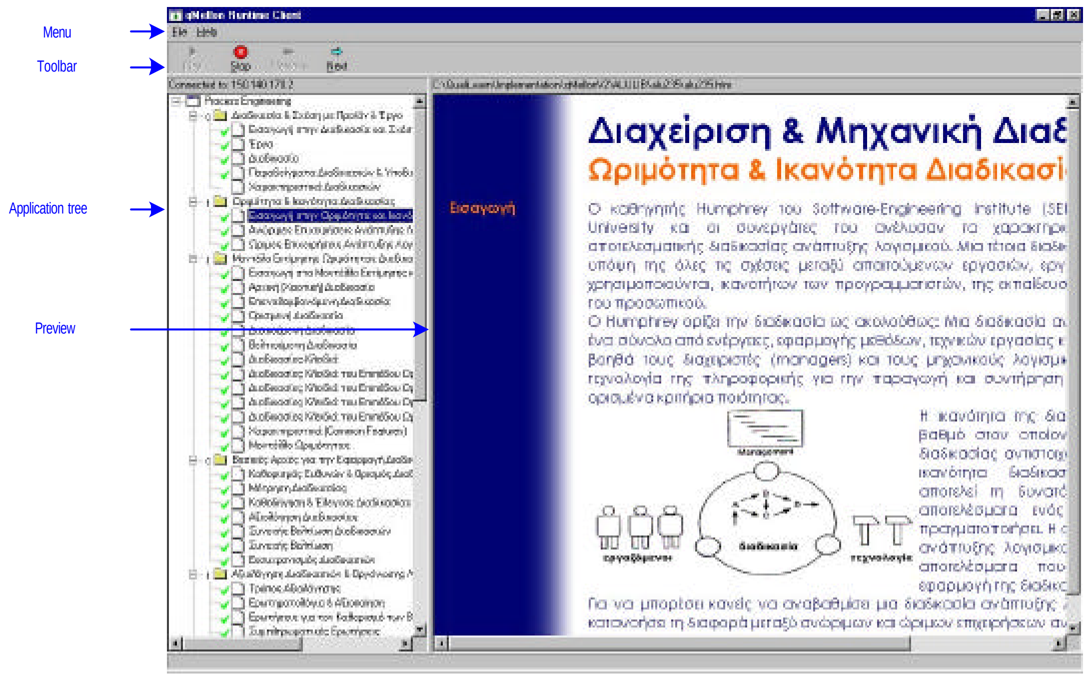


Figure 1. Main Runtime Window

1.3 Menu

The menu includes the following selections:

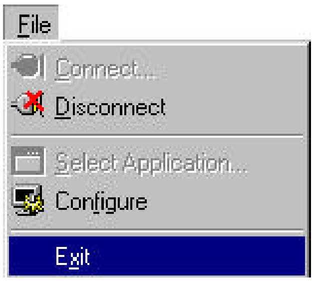


Figure 2 File Menu

- Connect-It connects the Runtime Client with the Application Server
- Disconnect- It disconnects the Runtime Client from the Application Server
- Select Application-Application selection
- Configure-It opens a dialog box for the configuration of the program basic parameters
- Exit-Closes the program

1.4 Toolbar

The toolbar includes the following buttons:

Button	Function	Description
	Play	It starts the study of a stage
	Stop	It terminates the study of a stage
	Previous	It moves to the previous ALU of a stage
	Next	It moves to the next ALU of a stage

Table 1 Toolbar buttons

1.5 Application Tree

The application tree (Figure 3) has a root with the name of the educational application and several branches labeled with the name of the stages. Each branch has several leafs labeled with the names of the ALUs.

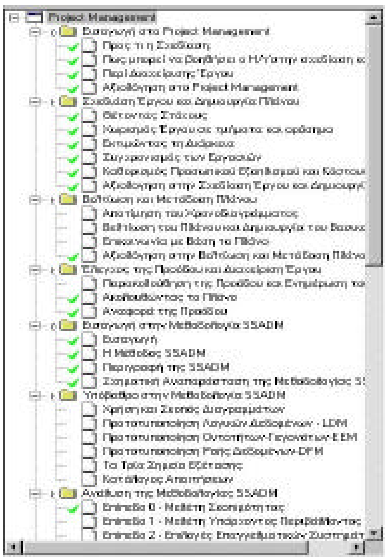


Figure 3 Application Tree

1.6 Preview Window

In general, into the preview window is displayed the HTML file that corresponds to the ALU, which has been selected by the user-student from the application tree. Particularly

- If an educational application or a stage has been selected, then its introductory ALU will be displayed.
- If a stage that includes a methodology has been selected, then the methodology will be executed.

2 RUNTIME CLIENT FUNCTIONS

2.1 Connection with the Program

Every time you run the Runtime Client, the Login Screen is presented (Figure 4). You must type your login name and your password (the system administrator provides both of them to you) in order to connect with the server and study the educational applications that you are registered to.



Figure 4 Login Screen

When you type the login name and the password then you have the option to select the educational application you desire to study (Figure 5). After your selection, the main Runtime Client window is displayed.



Figure 5. Educational Application Selection

2.2 Study of Educational Material

In order to study the educational material, you only select the desired object from the application tree. If the stage is on Coach mode (the letter "c" in front of the stage label indicates the Coach mode), then you cannot select randomly its ALUs. Instead, you select the stage and you navigate by using the button "Play". You can use the button "Previous" and "Next" in order to move to the other ALUs of this stage. You can interrupt the study of the stage by pressing the button "Stop" or by selecting some other object from the application tree.

By pressing right click on the application tree, it is presented a popup menu with several selections concerning the particular object. When you press right click on a stage (and particular a stage of Coach mode), the popup menu includes the selections:

- “Play”
- “Stop”

When you press right click on an ALU the popup menu includes the selections:

- “Next”
- “Previous”
- “Stop”
- “Show in New Window”, which displays the ALU preview in a separate window (Figure 6).

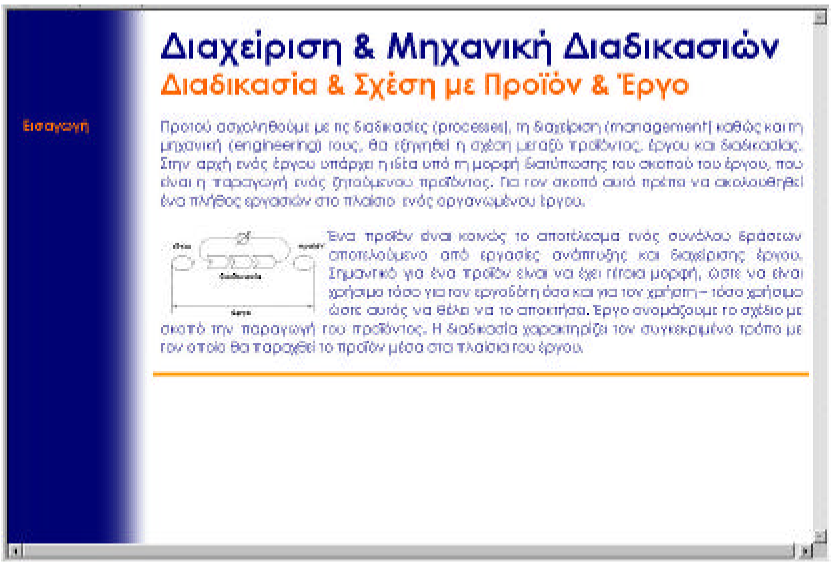


Figure 6. HTML Viewer

You can select a different educational application by using “File|Select Application” from the menu.

2.3 Configuration Screen

You can connect with the server or disconnect from it by selecting “File|Connect” or “File|Disconnect” from menu. You can configure your system by selecting “File|Configure”. The dialog box that appears (Figure 7), gives you the capability to configure:

- The IP Address of the server
- The path that the ALUs are stored,
- The external HTML Editor

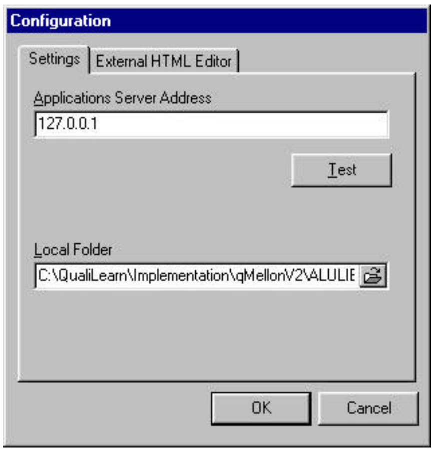


Figure 7. Configuration Dialog Box

2.4 Methodology Execution

In order to execute a methodology follow the next steps:

Step 1:

Open an educational application.

Step 2:

Select a stage with "Methodology" mode.

Step 3:

Press the button 'Play' in order to start the MES Runtime subsystem that handles the methodologies.

Step 4:

A new window is displayed (Figure 8).

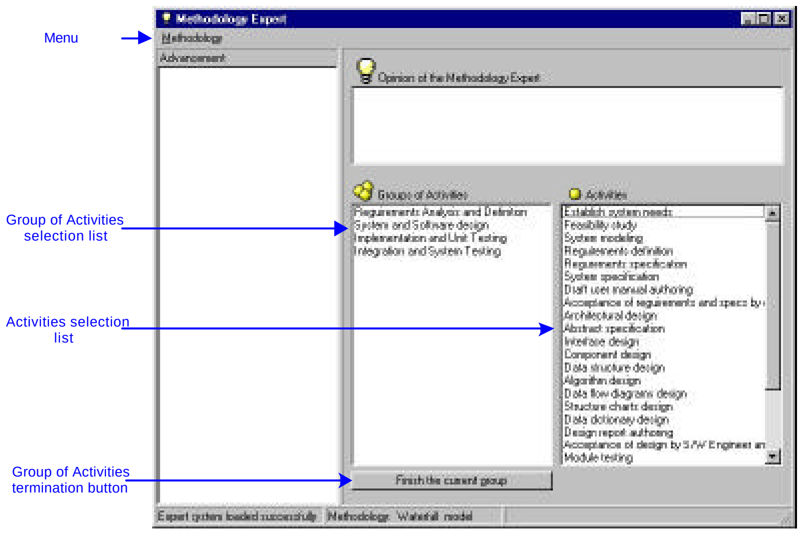


Figure 8. Methodology Expert Main Window

Step 5:

Now, you must put in right order the group of activities and the activities that are presented in the corresponding lists. (A methodology is composed of group of activities and each group of activities

is composed of activities. Each activity produces several artifacts and each artifact needs other artifacts in order to be produced, *see qMellon Authoring Client Manual*) For example, double click on the "Requirements Analysis and Definition" in the Group of Activities list. This is a correct selection and the Methodology Expert answers as in Figure 9. Every time you make a correct selection, the message of the Methodology Expert is colored green and the produced artifacts are presented. In addition, your selection is displayed in the Advancement tree.

Step 6:

Now, you must find those activities (from the list Activities) that bring to an end the group 'Requirements Analysis and Definition' (Figure 10).

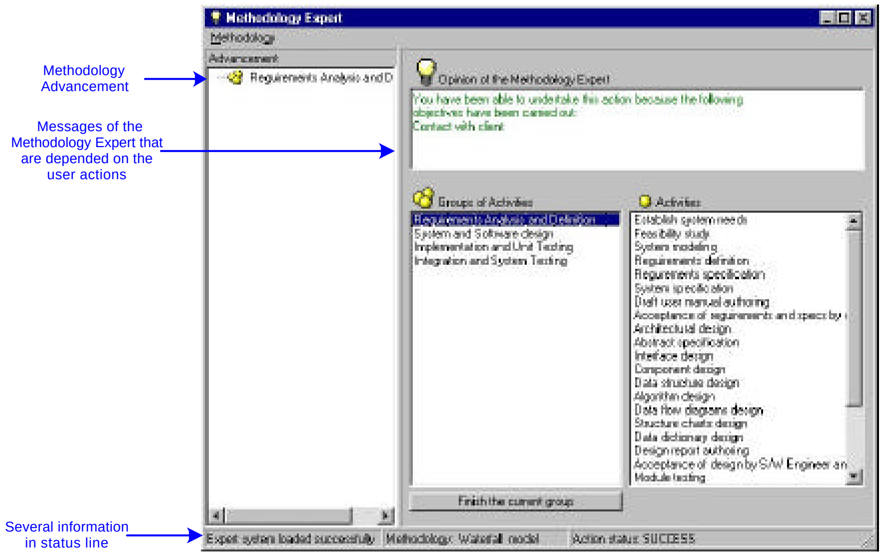


Figure 9 MES Runtime with Waterfall Model Demo Application

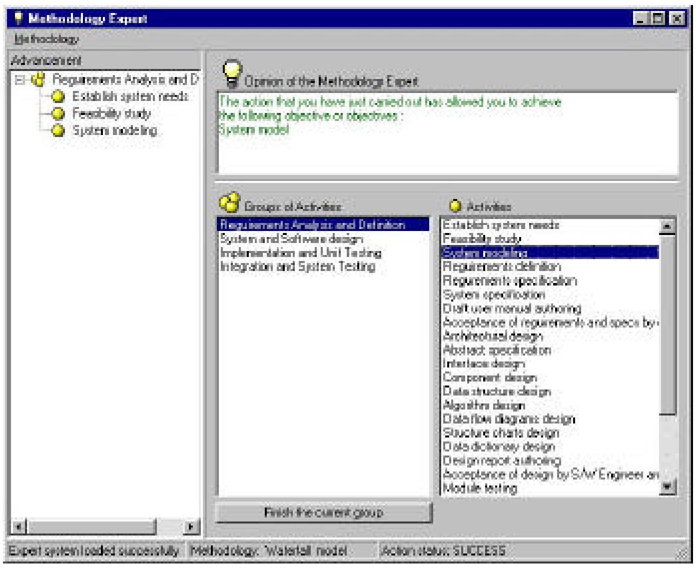


Figure 10. MES Window after the choice of a correct Activity

Step 7:

When you make a wrong selection, for example select the Group of Activities "Implementation and Unit Testing" the message of the Methodology Expert is colored red (Figure 11).

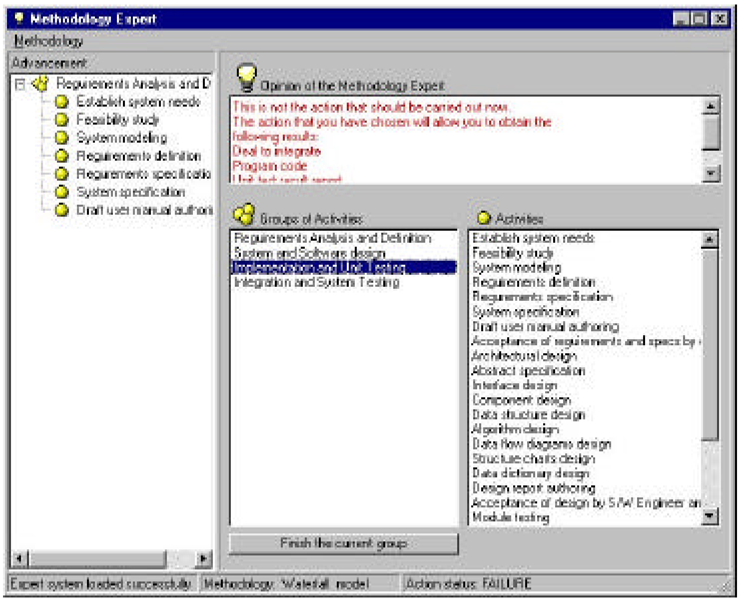


Figure 11 MES Window after the choice of a wrong Activity

Step 8:

When you find all the activities that compose a group of activities then you must press the button "Finish the current group", in order to declare the this group has been completed.

If the methodology is COACH mode, then the Methodology Expert guides you with appropriate messages. These messages vary proportionately the kind and the amount of the errors. If you make three consecutive errors then Methodology Expert shows you the correct selection. However, all the errors you make, are recorded by the system.

If the methodology is JUDGE mode, then the Methodology Expert does not guide you, instead it only evaluates your selection.

Figure 12 displays the answer of the Methodology Expert in JUDGE mode after a correct selection. Figure 13 displays the answer of the Methodology Expert in JUDGE mode after an incorrect selection.

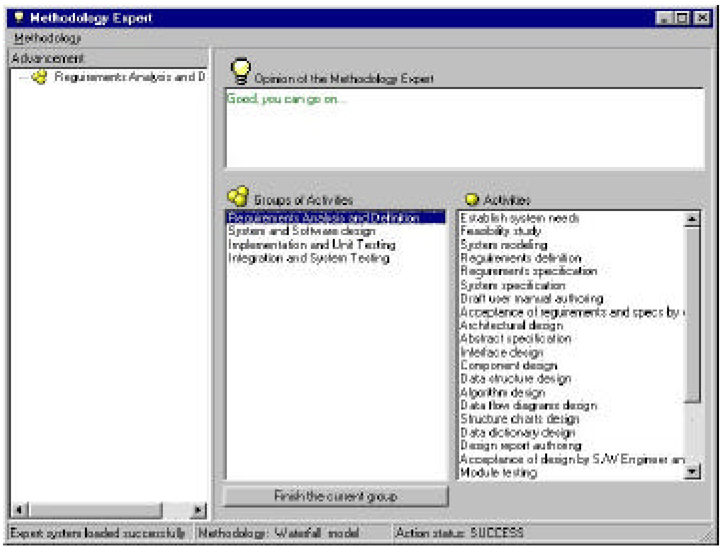


Figure 12 MES Window after the choice of a correct Activity in 'JUDGE' mode

Step 9:

The methodology is completed when all the group of activities and the activities have been put in the right order. Figure 14 displays the status of the MES Runtime when the methodology has been completed.

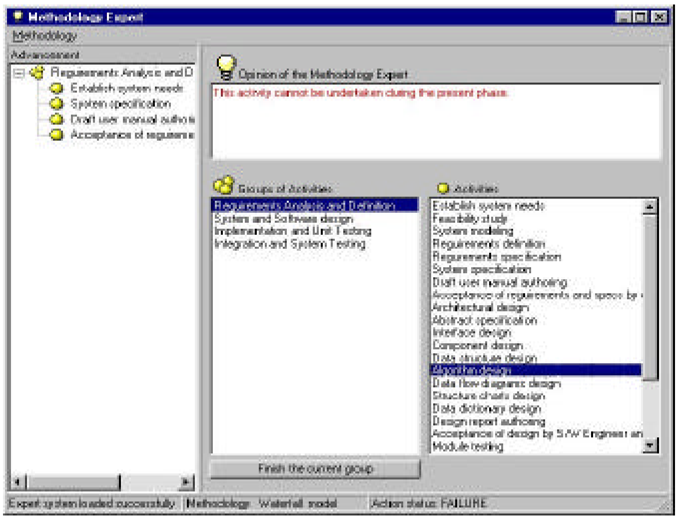


Figure 13 MES Window after the choice of an incorrect Activity in 'JUDGE' mode

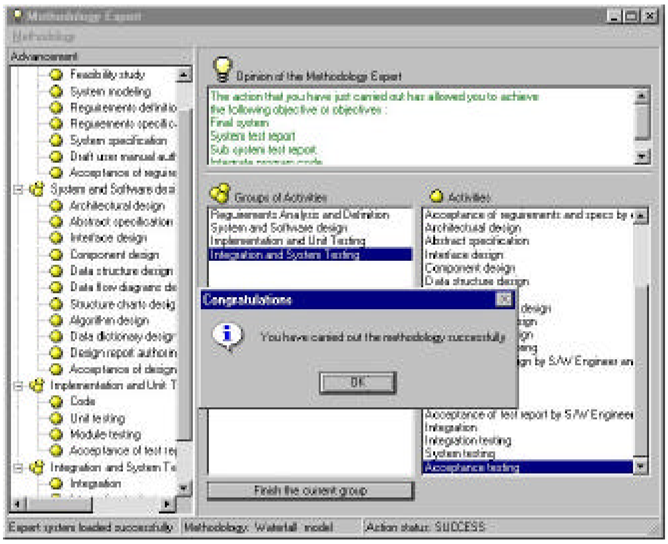


Figure 14 MES Window when the methodology has been completed